

FIG. 1
Tobamovirus Expression Vectors
TM V

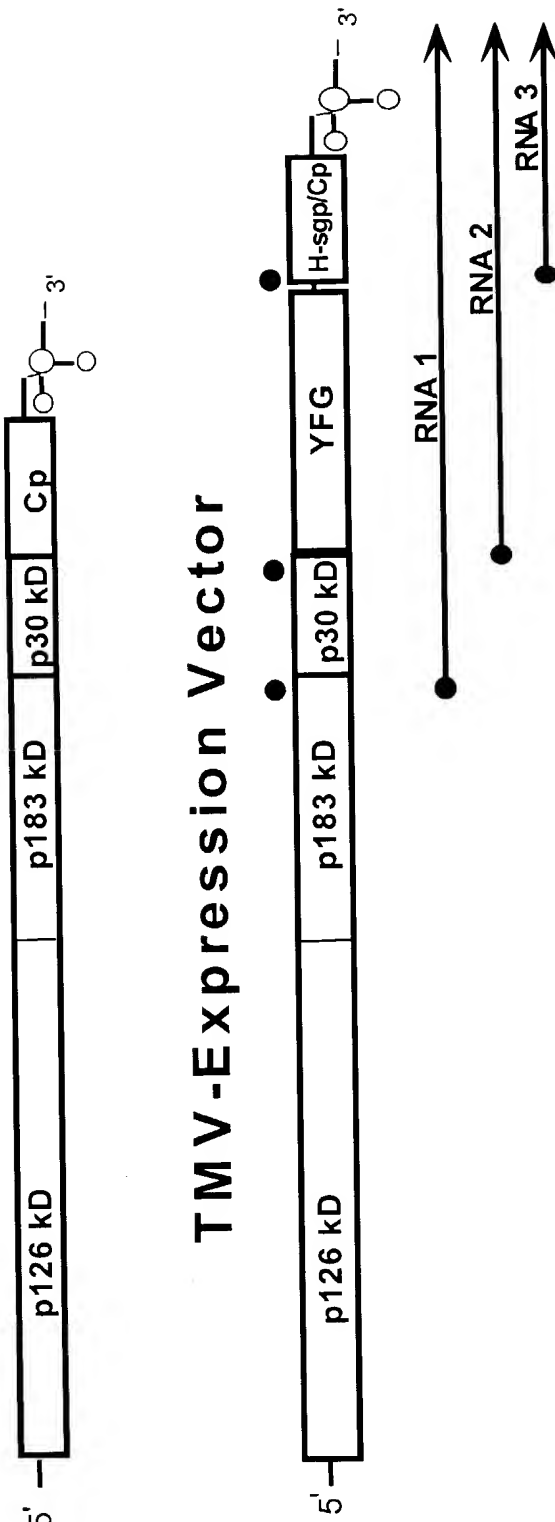


FIG. 2

Tobamovirus Vector for rGal-A Expression

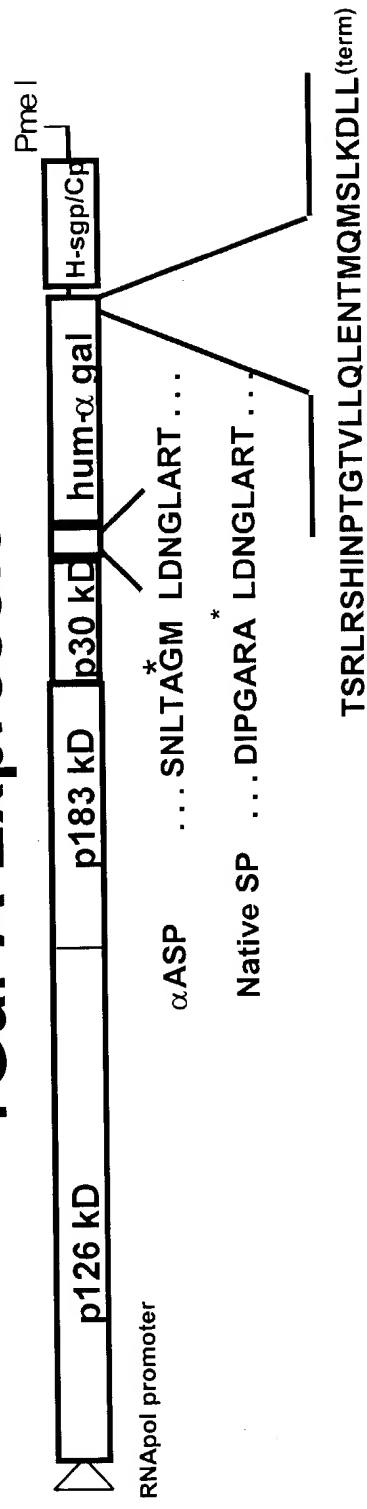


FIG. 3
Accumulation and Activity of WT rGal-A

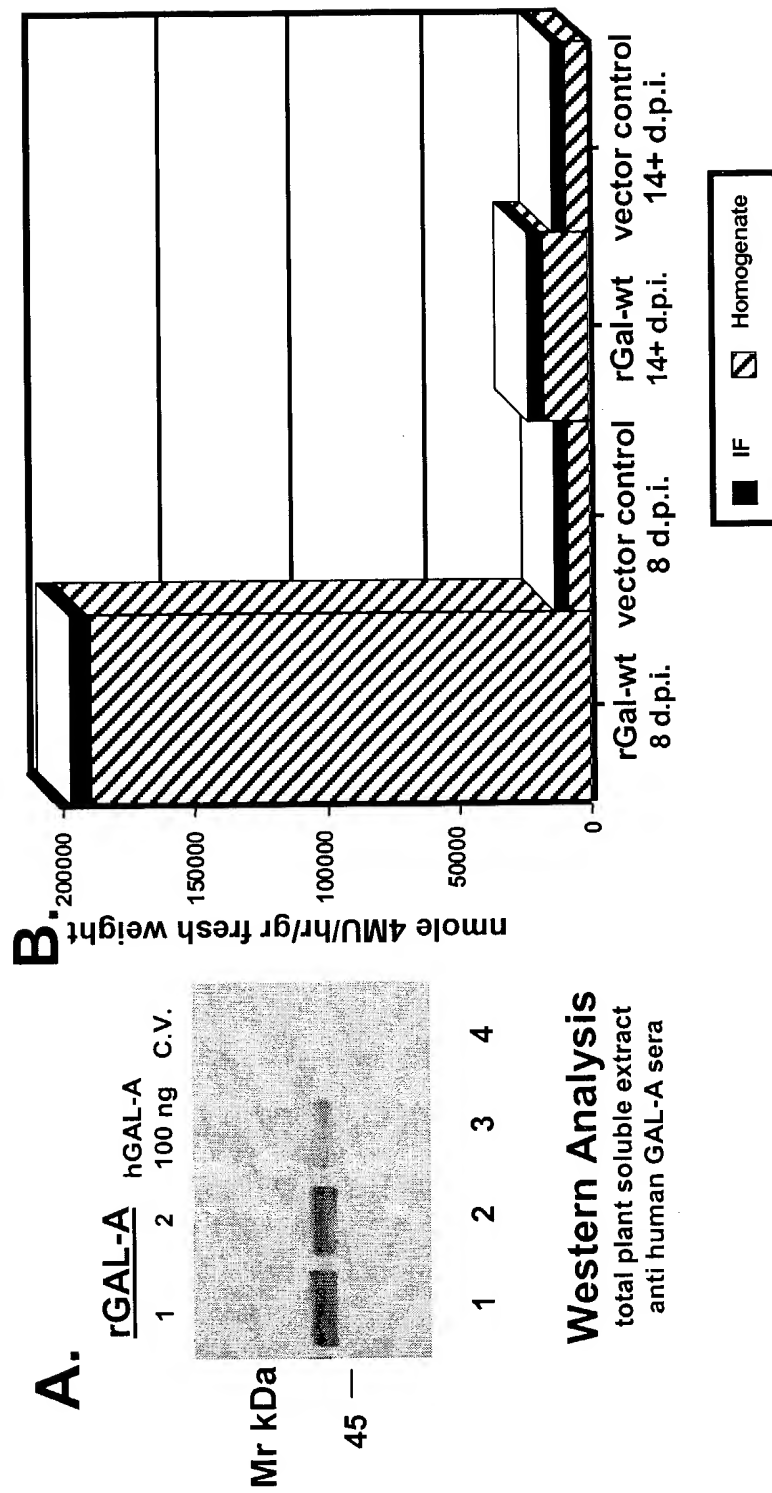


FIG. 4
Accumulation and Activity
of WT and ER-Targeted rGal-A

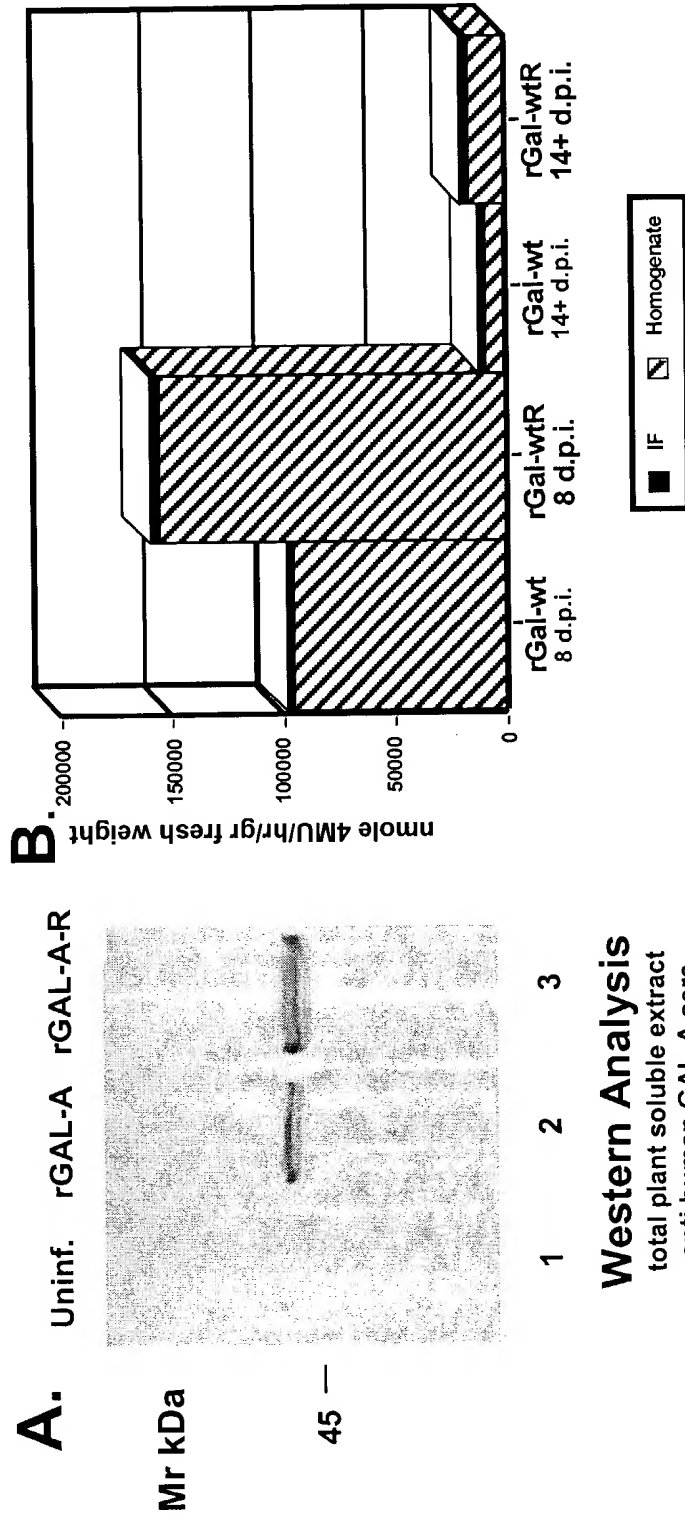


FIG. 5 **Carboxy-Modifications to rGal-A**

	-30	- 20	-10
WT			*TSRLRSHINPTGTVLLQLENTMQMSLKDLL
WTR			TSRLRSHINPTGTVLLQLENTMQMSLKDLLSEKDEL
Δ4			TSRLRSHINPTGTVLLQLENTMQMSL
Δ4R			TSRLRSHINPTGTVLLQLENTMQMSLSEKDEL
Δ8			TSRLRSHINPTGTVLLQLENTM
Δ8R			TSRLRSHINPTGTVLLQLENTMSEKDEL
Δ12			TSRLRSHINPTGTVLLQL
Δ12R			TSRLRSHINPTGTVLLQLSEKDEL
Δ25			TSRLR
Δ25R			TSRLRSEKDEL

Control virus (GFP, AMP, IFN g)

* potential CTPP cleavage (Gene 58:177,1987) .

FIG. 6
Western Blot Analysis of
Carboxy-modified rGal-A

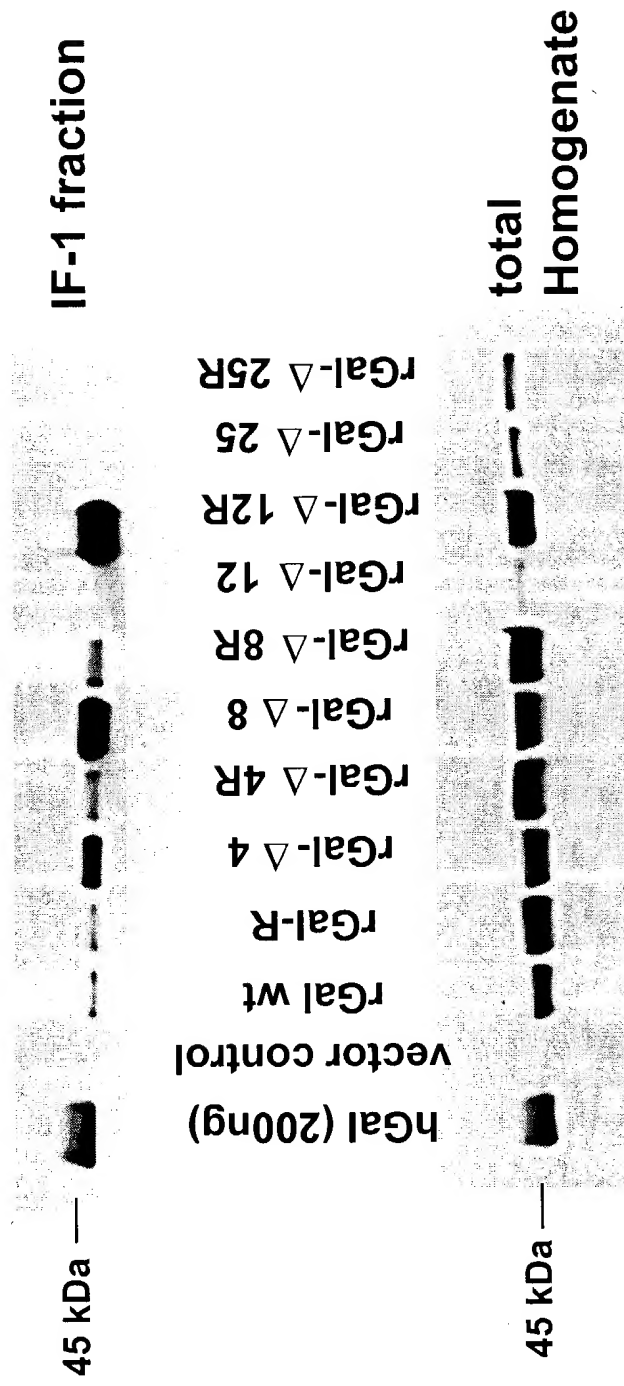
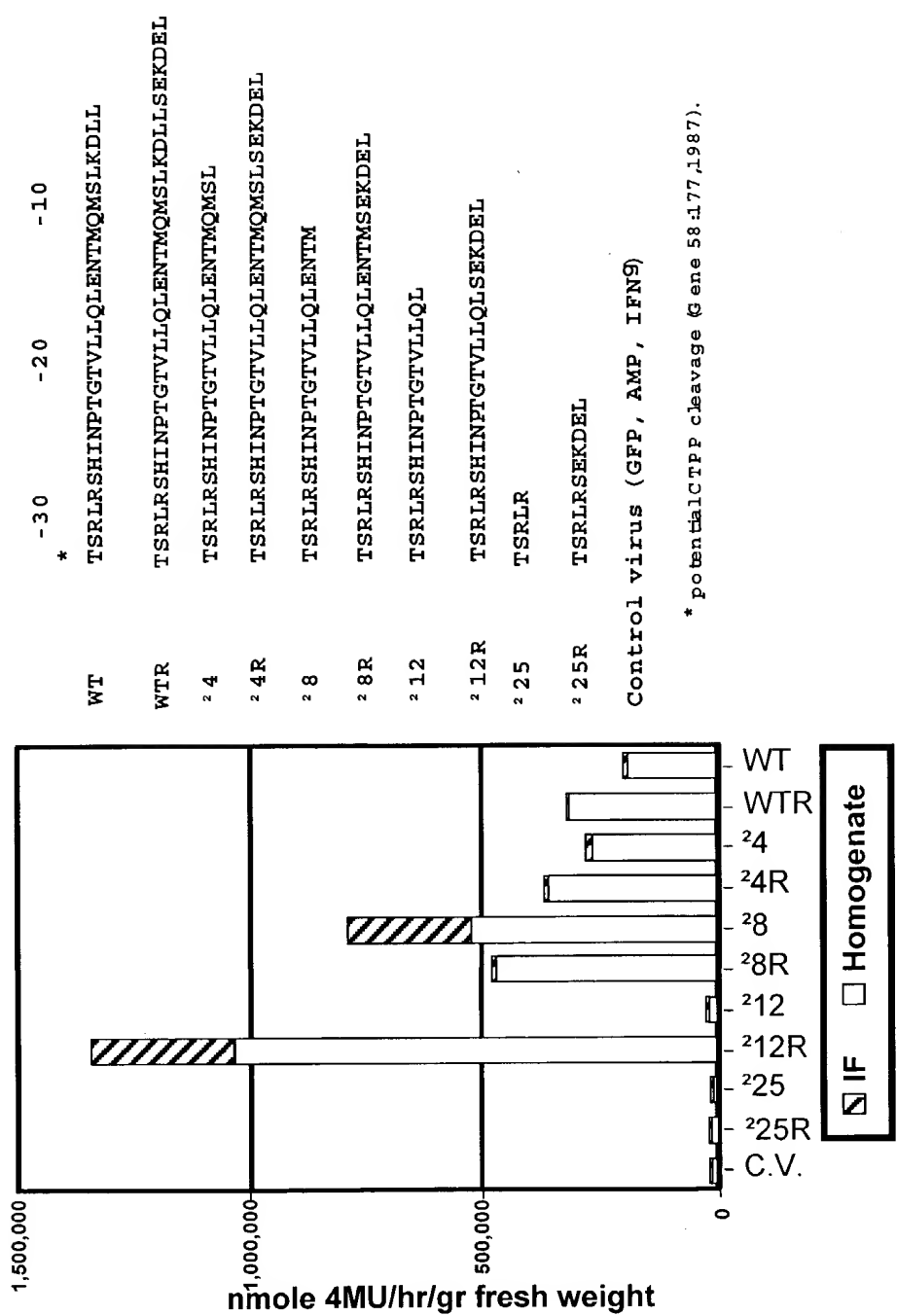


FIG. 7
Enzymatic Activity of Carboxy-Modified rGal-A



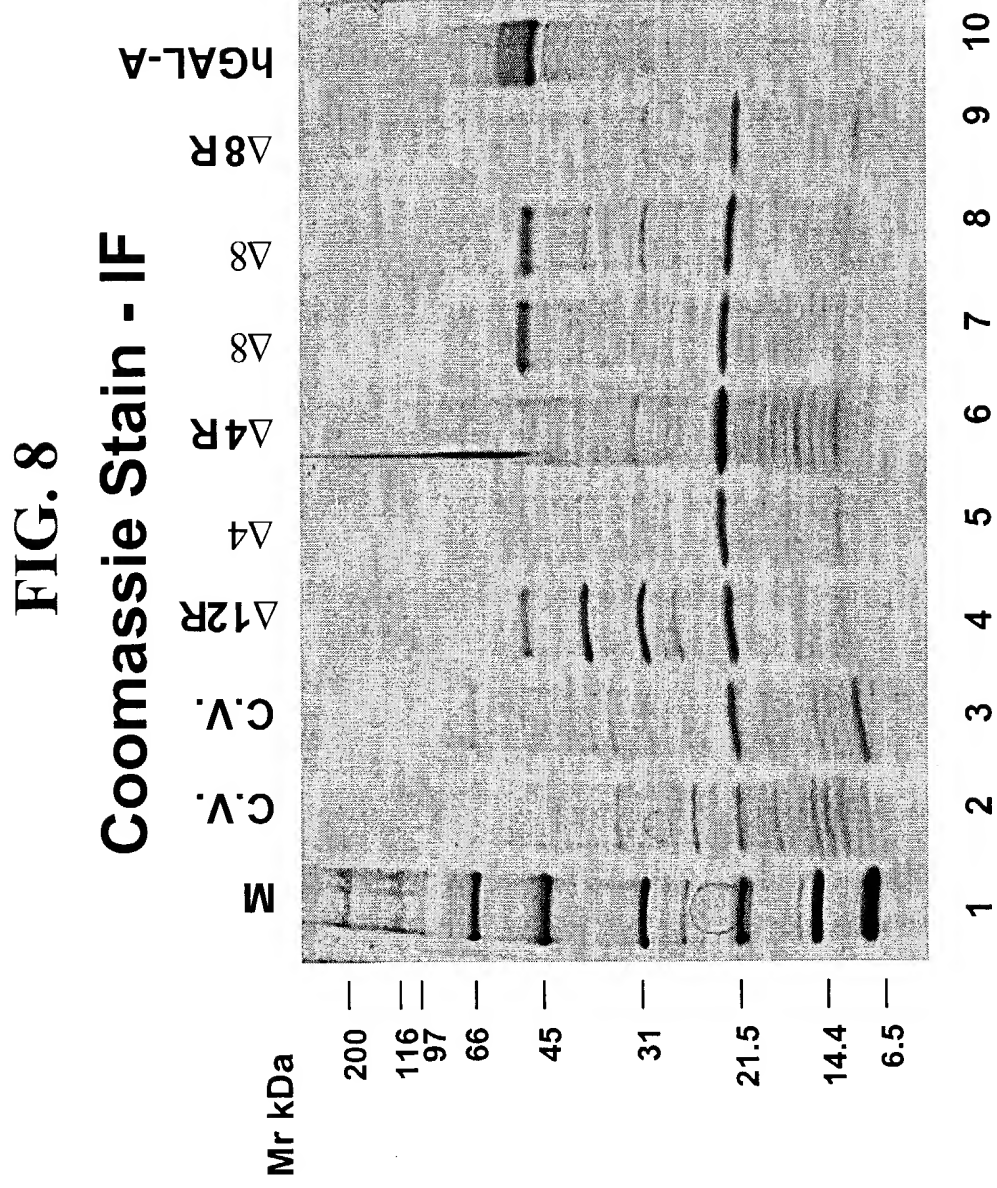
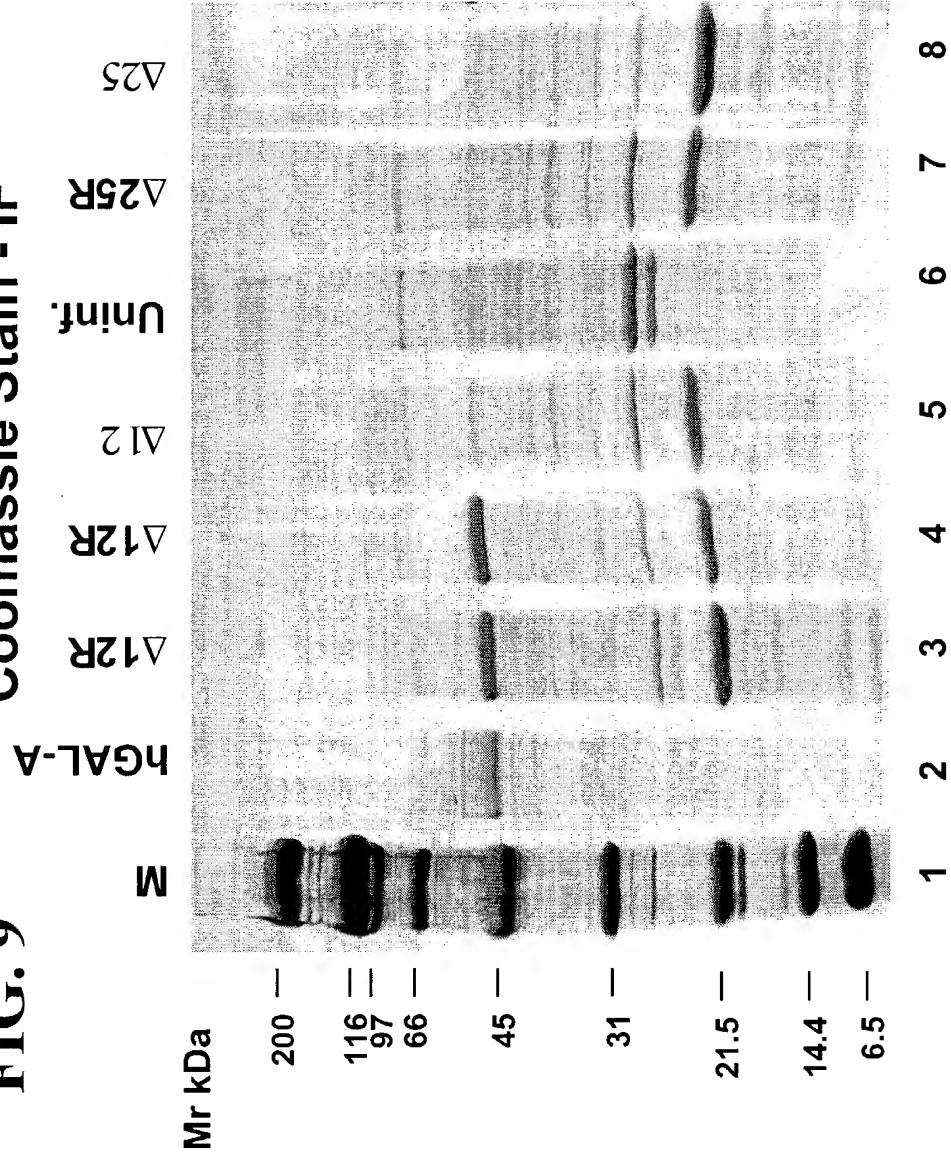


FIG. 9

Coomassie Stain - IF



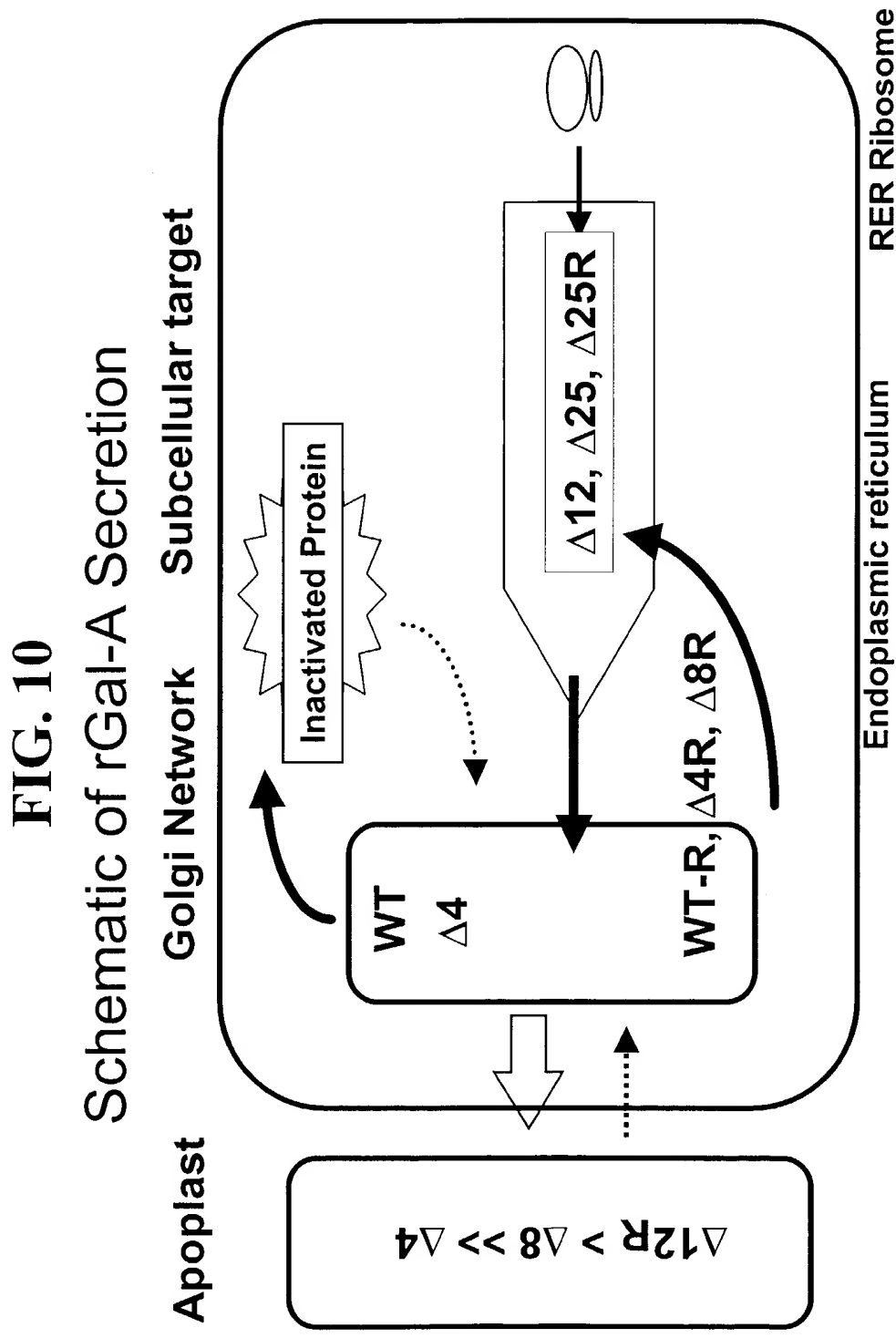


FIG. 11

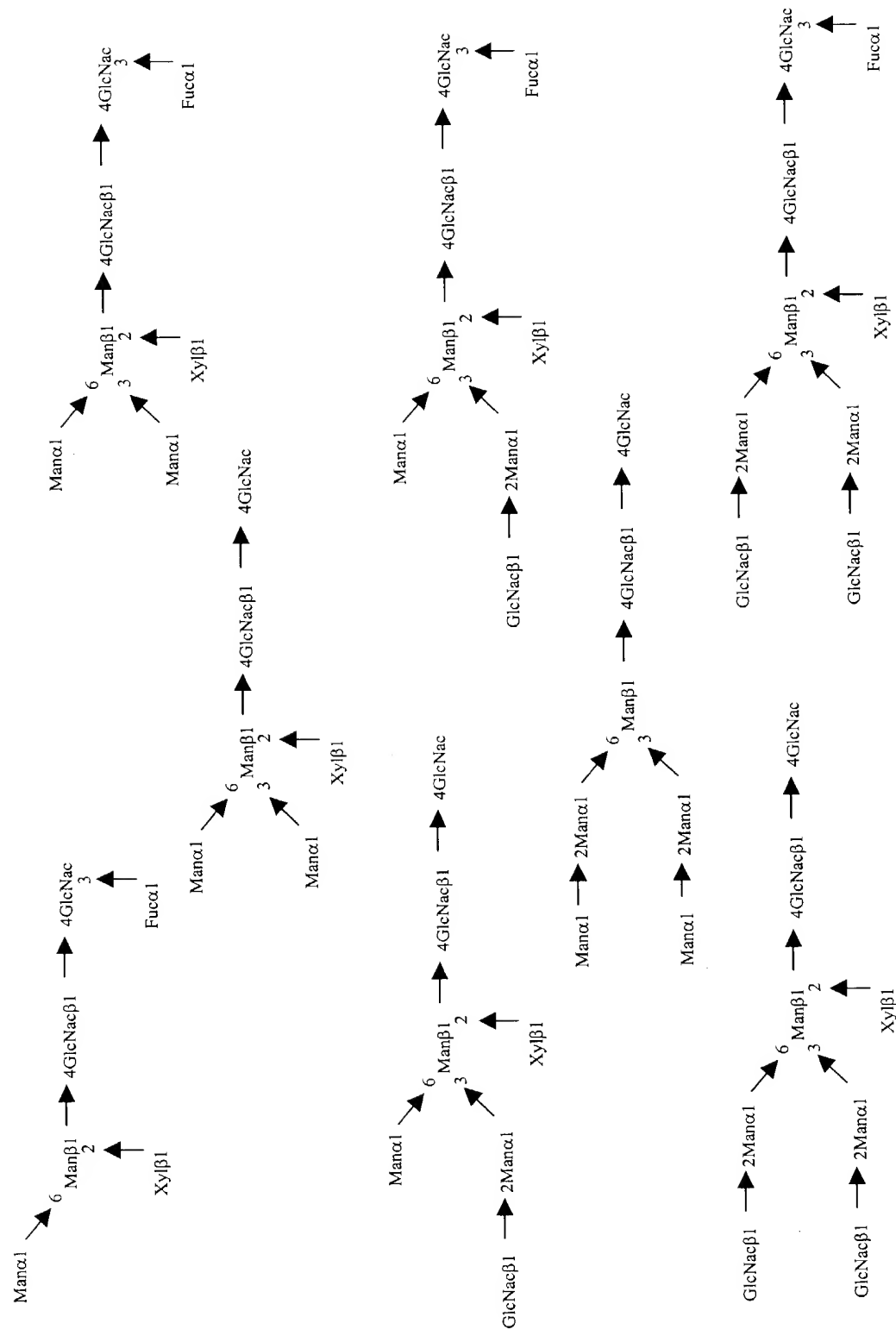


FIG. 12-1

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GCATACTGGTGTGTTAATTTCTTGTGCGATGTCTTGTGCGAAATTCATATGTTTACGGAGACACACAGCAGATTTC
CATACATCAATAGAGTTTCAGGATTCCTGACCCCGCCCATTTTGCCAAATGGAAGTTGACGAGGTGGAGACACGCAGA
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GGTCGATGTCAAGGCACACCTGTTGCTCAAGTACTACACTGTTGTTATGGATCCTTAGTTAGTATCATTAGAGATC
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CGCGAGATTGAGGATTTCTTCGAGATCTCGACAGTCTGTGCCGATGATGTCTGGAGCTGGATATATCAAAATACGA

FIG. 12-2

CAAATCTCAGAATGAATTCACCTGTGCAGTAGAATACGAGATCTGGCGAAGATTGGGTTTGAAGACTTCTTGGGAGAAG
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FIG. 12-3

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TCTCGCGAAACGTTTGGTGGCGGGACCACTGACGAAGGCTTGAGCGAGGGCGTGCAAGATTCCGAATACCGCAAGCGAC
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FIG. 13-1

GTATTTTACAACAATTACCAACAACAACAAACAACAGACAACATTACAATTACTATTTACAATTACAATGGCATAACACA
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GGCAGGCGACGCATTAGAGATCAGGGTGCCTGATCTATATGTGACCTTCCACGACAGATTAGTGACTGAGTACAAGGCCCT
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AGCGAAGGTTATAGTCCGCGTCATGAGCAATGAGAGCGGTCTGACTCTCACATTTGAACGACCTACTGAGGCGAATGTTG
CGCTAGCTTTACAGGATCAAGAGAAGGCTTCAGAAGGTGCATTGGTAGTTACCTCAAGAGAAGTTGAAGAACCCTCCATG
AAGGTTTCGATGGCCAGAGGAGAGTTACAATTAGCTGGTCTTGTCTGGAGATCATCCGGAATCGTCTATTCTAAGAACGA
CGAGATAGAGTCTTTAGAGCAGTTTCATATGGCGACGCGAGATTTCGTTAATTTCGTAAGCAGATGAGCTCGATTGTGTACA
GGGTCCGATTAAAGTTACGCAAAATGAAAACTTTATCGATAGCCTGGTAGCATCACTATCTGCTGCGGTGTGCAATCTC
GTCAAGATCCTCAAAGATACAGCTGCTATTGACCTTGAAACCCGTCAAAGTTTGGAGTCTTGGATGTTGCATCTAGGAA
GTGGTTAATCAAACCAACGGCCAGAGTCATGATGGGGTGTGTTGAAACCCACGCGAGGGAGTATCATGTGGCGCTTT
TGGAATATGATGAGCAGGTTGTGTGACATGCGATGATTGGAGAAGAGTAGCTGTTAGCTCTGAGTCTGTGTTTATTCC
GACATGGCGAAACTCAGAACTCTGCGCAGACTGCTTCGAAACGGAGAACCGCATGTGAGTAGCGCAAAGGTTGTCTTGT
GGACGGAGTTCCGGCTGTGGA AAAACCAAAGAAATCTTTCCAGGTTAATTTTGATGAAGATCTAATTTTAGTACCTG
GGAAGCAAGCCGCGAAATGATCAGAAGACGTGCGAATTCCTCAGGGATTATGTGGCCACGAAGGACAACGTTAAAACC
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GCATACTGGTGTGTAAATTTTCTGTGGCGATGTCAATTGTGCGAAATTGCATATGTTTACGGAGACACACAGCAGATTC
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ACTACTCTCCGTTGTCCAGCCGATGTACACATTATCTGAACAGGAGATATGAGGGCTTTGTCTAGGCACTTCTTCGGT
TAAAAAGTCTGTTTCCAGGAGATGGTCCGCGAGCCCGGTGATCAATCCGATCTCAAAACCTTGCATGGCAAGATCC
TGACTTTTACCCAATCCGATAAAGAAGCTCTGCTTTCAAGAGGGTATTAGATGTTTCACTGTGCATGAAGTGAAGGC
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GGTCGATTTGTCAAGGCACACCTGTTGCTCAAGTACTACACTGTTGTTATGGATCCTTTAGTTAGTATCATTAGAGATC
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CAAATAAAAAATGTTTCTTGTTCAGTAGAGAGTCTCTCAATAGATGGTTAGAAAAGCAGGAACAGGTAACAATAGGCCAG
CTCGCAGATTTGATTTTGTGGATTGTCCAGCAGTTGATCAGTACAGACACATGATTAAAGCACAAACCAAAACAAAGTT
GGACACTTCAATCAAACGGAGTACCCGCTTTGCGAGCAGATTGTGTACCATTCAAAAAGATCAATGCAATATTTCGGCC
CGTTGTTTAGTGAGCTTACTAGGCAATTACTGGACAGTTGATTCGAGCAGATTTTGTGTTTTTCAAGAAGACACCA
GCGCAGATTGAGGATTTCTTCGAGATCTCGACAGTCATGTGCCGATGGATGCTTGGAGCTGGATATATCAAAATACGA

FIG. 13-2

CAAACTCTCAGAATGAATTCCACTGTGCAGTAGAATACGAGATCTGGCGAAGATTGGGTTTCGAAGACTTCTTGGGAGAAG
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